

**Halcyon chloris* Boddaert. Mangrove Kingfisher. Single birds were seen on the following dates, 8 May, 6 June and 20 September, 1962, and on 26 September, 1963.

**Lanius cristatus* Linnaeus. Brown Shrike. One seen on 7 April, 1962.

References:

- Andrews, C. W. 1900. *A Monograph of Christmas Island*. British Museum.
 Gibson-Hill, C. A. 1947. Notes on the Birds of Christmas Island. *Bulletin of the Raffles Museum*, No. 18: 87-165.
 Alexander, W. B. 1955. *Birds of the Ocean*.
 Voous, K. H. 1964. Notes on a Collection of Birds from Christmas Island. *Nytt Magasin For Zoologi*, Vol. 12: 38-47.

The eggs of the White-tailed Blue Chat, *Cinclidium leucurum*, and the Large Niltava, *Niltava grandis*

by C. J. O. HARRISON and S. A. PARKER

Received 25th October, 1965

E. C. Stuart Baker (1933) stated that the eggs of the White-tailed Blue Chat, *Cinclidium leucurum*, and those of the Large Niltava, *Niltava grandis*, were very similar and could only be told apart when compared in series. An examination of the eggs of these species in the collection of the British Museum (Natural History) received from collectors other than Baker revealed that, although the length of the eggs was similar in many cases, the eggs of *C. leucurum* had a breadth range of 15.8-17.7 mm. and were pale with a pink tint, while those of *N. grandis* had a breadth range of 17.5-18.7 mm. and were all distinctly buff in colour (Fig. 1). When the eggs of *N. grandis* in Baker's collection were examined it was found that about half were pale pinkish with a breadth of 16.5-17.5 mm. and the

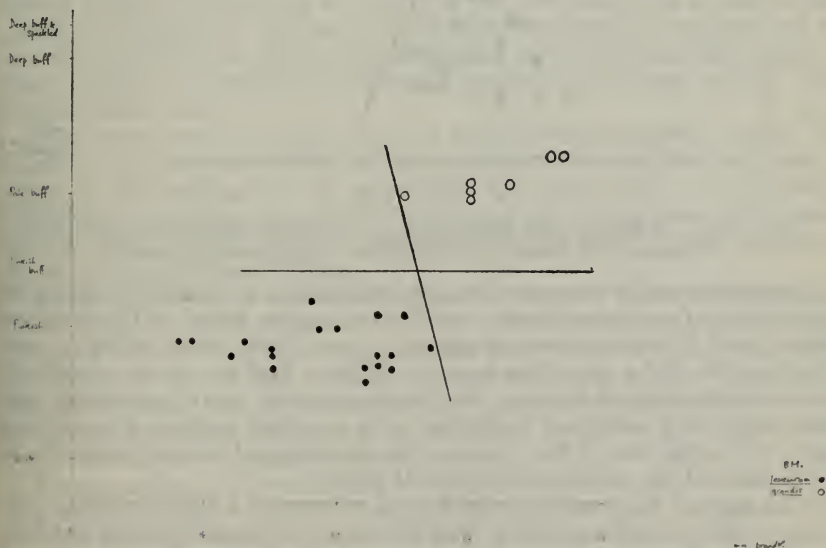


FIG. 1. Known specimens of *C. leucurum* (black spot) and *N. grandis* (open circle). Abscissa = breadth. Co-ordinate = colour.

remainder were buff with a range of 17.3–18.9 mm. (Fig. 2). When Baker's eggs of *C. leucurum* were also examined it was found that these also consisted of a number of pink eggs with a breadth range of 16.5–17.5 mm. and buff eggs with a range of 17–18.5 mm.; together with two obviously atypical buff eggs in a single clutch with breadths of 16.5 and 16.8 mm. (Fig. 2).

An examination of the skins of these birds showed that the females are extremely similar in appearance, the only obvious difference being the presence of a few blue feathers on the side of the neck in *N. grandis*. The sizes are different, *C. leucurum* being a smaller species, but they are sympatric and it would be easy to confuse the two in the field. It is most improbable that two species of dissimilar size should lay similar eggs, and that the eggs of both should consist of two distinct types—broader buff eggs, and more slender pink eggs. There is every reason to accept the evidence of other collectors and to regard the narrower pink eggs as those of *C. leucurum*, and the broader buff ones as those of *N. grandis*.

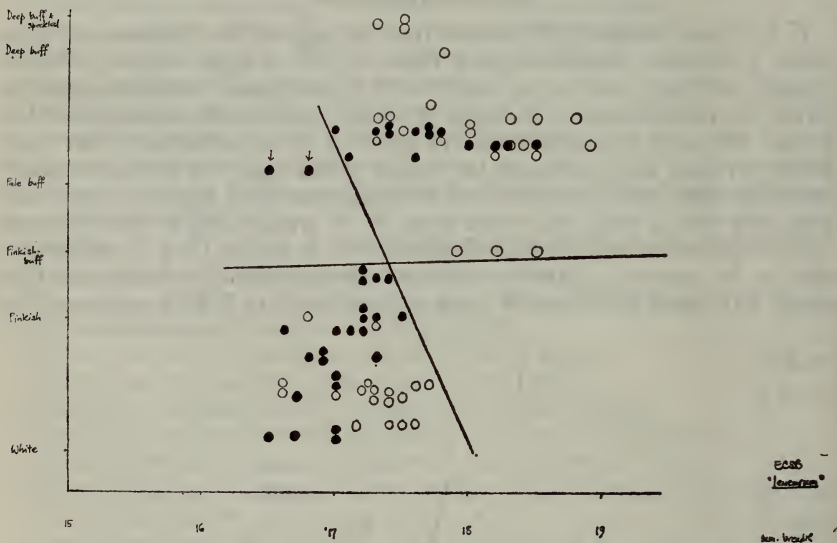


FIG. 2. E. C. S. Baker's eggs. Black spots = *C. leucurum*, fide Baker. Open circles = *N. grandis*, fide Baker. Arrows indicate a single abnormal clutch.

It would therefore appear that the information in Baker's *Nidification of the birds of the Indian Empire*, vol. 2 is inaccurate. Based on this revision, the eggs of *C. leucurum* would appear to vary from almost white to pale pink, a few of the pink eggs having a slightly buff tint, some showing a faint darker coronal band at the larger end, and more pigmented eggs showing a very indistinct indication of a speckled pattern. The average size of 65 eggs was 22.9 x 17 mm. The maxima and minima were 25.2 x 17.4, 23.6 x 17.7; 20.7 x 16.8, 22.8 x 15.8 mm.

The eggs of *N. grandis* were pale buff, often with a finely speckled pattern of darker buff, and with a faint indication of a small coronal band on some eggs. The average size of 38 eggs was 24.7 x 18 mm. The maxima and minima were 26.7 x 18, 23 x 18.9; 20 x 17.6, 23.2 x 17 mm.

Baker referred to differences of opinion concerning the nests of these species but this may be linked with the confusion over the eggs. The nest of *C. leucurum* appears to be a cup nest usually placed in a cavity or crevice in a bank, or among overhanging rocks or tree-roots, usually by a stream, and usually hooded or domed where the site does not provide a natural roof. The material is fibrous rootlets and dead leaves, with green moss on the outside. The size is about 5.5 inches wide and deep externally, with a cavity about 2.5 inches wide and 1 inch deep. The nest of *N. grandis* is also built into a cavity in a bank or raised structure of some kind. It is made of fresh green moss and lined with fine roots. It is a cup with external diameter of *c.* 6 inches and *c.* 4 inches deep. The inner cup is *c.* 3 inches across and 1.5 inches deep.

As with some other clutches from Baker's collection (Harrison, in press) there appears to be evidence of clutches of normal or large size having been made up from several smaller clutches, and it would appear advisable to treat Baker's data on clutch size with due caution.

References:

Harrison, C. J. O. in press. Some clutches of wader eggs from E. C. Stuart Baker.
Bull. Brit. Orn. Cl.

Guanay or Bougainville's Cormorant, *Phalacrocorax bougainvillii* (Lesson)

by A. W. JOHNSON

Received 9th November, 1965

In strictly commercial terms the Guanay Cormorant is without doubt the most valuable bird in the world, as the guano which it deposits on desert islands off the coast of Peru laid the foundation for a world-wide fertilizer industry in the past century and through its extensive use in present day Peruvian agriculture continues to represent a vital asset to that country's economy. Not without reason has it been called "The billion dollar bird".

Probably the most typical of all the birds of the Humboldt current, its centre of distribution is on the off-shore islands of central Peru on which it nests by the million and is responsible for about 85% of the guano deposited; once the reproductive cycle is over, it migrates from these islands moving south as far as Valdivia in Chile and, in lesser numbers, north to Punta Parinas in Peru.

These migrations are always confined to the cold waters of the Humboldt current, which parallels the coasts of Peru and part of Chile and presents one of the highest concentrations of organic life to be found anywhere in the world. Among its myriad forms is the "Anchovy", *Engraulis ringens*, and on this one fish the Guanay is completely dependent, a dependence which automatically regulates the entire population and hence the supply of guano from year to year.

Every so often, for reasons not yet properly understood, but which are apparently subject to cycles of approximately nine years, the Humboldt current deviates from its normal course, the temperature of the coastal waters rises, *Engraulis ringens* in its countless millions disappears and the Guanay is faced with starvation. Frantically the birds fly southwards in